

1871.
CATALOGUE
OF
HYMENOPHYLLUMS
AND
TRICHOMANES.

J. BACKHOUSE & SON,

YORK.



EXPLANATORY NOTES.

As combining delicacy of texture with beauty of form, no class of Ferns can at all compare with those contained in the two genera *Hymenophyllum* and *Trichomanes*. From the wonderful transparency of the fronds of many of them, the name of "Filmy Ferns" has been given to the tribe. Not a few are so extremely thin that "Diamond print" may be easily read *through* their fronds. When laden with moisture,—and especially with moisture *condensed* upon the fronds, by precipitation from the atmosphere, and reflecting a powerful light, no polished emeralds can surpass the sparkling brilliancy of the drops which hang at the tips of almost every pinnule. Inhabiting shady ravines and damp forests chiefly in mountain districts where the air is always charged with moisture, these require a degree of humidity in the atmosphere much beyond what is needed for other ferns. Not a few of the most beautiful enjoy a very cold and damp climate, thriving vigorously with a temperature but few degrees above the freezing point; while some (*and probably all the charming species of Southern Chili*) bid fair to prove *perfectly hardy* in our climate under the conditions in which our own mountain species, *H. Wilsoni*, thrives. They must not be frozen dry (though some of them will bear even this!), but if buried in snow, or frozen into a solid mass of ice, will "thaw out" as though they had

enjoyed quite a treat! Imagine some of the deep mossy chasms of our mountain districts in Wales and Cumberland clothed with sheets of such ferns as *Hymenophyllum caudiculatum*, *fuciforme*, *Magellanicum* and *cruentum*! And there is not a doubt of their thriving perfectly in such situations. No vegetable forms could be more lovely, and they must assuredly claim the favourable notice of multitudes when their charms are known. Unfortunately most of these gems are still rare and costly. Owing to the extreme difficulty of getting them down from inland mountain regions, and still more from the "terrible ordeal" of having to endure long voyages through the tropics, the "decimation" which the importer has to endure is so great, as frequently to make the cost price of each survivor very high. Sometimes a mere fragment lives, and many years have to roll by before there is a possibility of multiplication. As a rule, when once "established" they are easy to cultivate. Many of those from temperate climates—like the species of New Zealand and Chili thrive well in Wardian Cases and other positions in an atmosphere fitted for the "Killarney Fern" (*T. radicans*) and our wild British *Hymenophyllums*. Those which have hairy fronds usually suffer by much mechanical watering, and prefer to be moistened only by condensation. Nearly all thrive well in sandy peat mixed with a little loam and numerous pieces of broken sandstone. The creeping *Hymenophyllums* do not like to have their slender rhizomes buried. Most of these succeed best on sandstone very slightly covered with the mixture of soil just named; their "nature" being to creep upon the surface of the rock, under or among the mosses which coat it; the slender rootlets only being buried. A very high temperature is especially to be avoided. Two or three hours of a dry and heated atmosphere will sometimes undo the work of years. Good light with absolute protection from every ray of actual sunshine

is the point to be aimed at. Few only like deep shade. The Killarney Fern in a wild state sometimes grows in positions so gloomy that its fronds are scarcely discernible, and some of its West Indian congeners (*T. spicatum* for instance) also court deep shade. In the following Catalogue where two temperatures are given, the *best* extremes of winter and summer are intended. For instance "40° to 60°" implies that *above* 60° in summer, is as much "a step in the wrong direction," as *below* 40° in winter. In our hottest summer weather it is difficult to maintain the low temperature of 60°, but this does not alter the fact that it would be better for the ferns if we could! Being chiefly "mountaineers" they enjoy very cool nights in their wild stations, even in summer; and it is well known that on some of the tropical plateaus where they abound at an elevation of 7000 to 8,000 ft., the annual variation of temperature scarcely ever exceeds 25 degrees. Purity of water is also an important matter. A Hymenophyllum or Trichomanes frequently moistened (by hand) with water containing lime, quickly loses its vigour. Rain water is the best for hand use, but no kind of watering of the *fronds* is at all comparable to that effected by the heavy "dew" of condensation, which is of course perfectly pure, assuming the air of the house to be so.

The descriptions given in the following pages are not intended to be scientifically complete, but to give a good general idea of each kind.

Where the term "*pinnate*" is used, the fern is divided quite down to the midrib. Where "*pinnatifid*" is used, there is a *membranaceous margin or wing* to the midrib, or main rachis. Where a fern is described as "*thrice divided (pinnate)*," it means that the main stem or central rachis has *no* winged margin, but that the midrib of the branches and branchlets *is* winged.

“Twice divided (*bipinnatifid*),” or “thrice divided (*tripinnatifid*),” means that the fern has *all* the midribs *winged*, whether divided two or three times. Where “*highly divided*” is used, the fern is either four times pinnatifid, or *once* pinnate and *three* times pinnatifid, or twice pinnate and twice pinnatifid, &c.

All the kinds enumerated in the Catalogue are in our possession as *living* plants.

PRICES ON APPLICATION.

JAS. BACKHOUSE AND SON.

YORK, 1st Mo., 1871.

FILMY FERNS.

(Hymenophyllum and Trichomanes.)

** in 1861 list*

HYMENOPHYLLUM.

- * **abruptum** (Hook.) A small fern ($1\frac{1}{2}$ to 2 inches,) densely carpeting mossy trunks and rocks, in the *West Indies*, with broad, *blunt*, glossy, once divided (*pinnatifid*),* curving fronds, on wiry stalks. 50° to 70° temperature.†
- * **æruginosum** (Carm.) A well marked species from *New Zealand*, with ovate, dense, thrice divided (*tri-pinnatifid*), fronds, 4 to 8 inches long, clothed with minute white or tawny pubescence. Pendent from rocks and trunks of trees. 40° to 65°.
- * **asp'enioides** (Sw.) A delicate and pretty fern, with narrow, glossy, slightly divided (*pinnatifid*), wiry stemmed fronds, 5 to 8 inches long; pendent from mossy rocks or trunks in the *West Indies*. 45° to 60°.

* See Explanatory Remarks.

† The first figure indicates the winter temperature.

- ✕ **H. caudiculatum** (Mart.) A species of almost unrivalled beauty from *Chili*, with erect and curving, or pendent, smooth, thrice divided (*tri-pinnatifid*), translucent fronds, 9 to 15 inches long. Stem broadly winged. Climbs among decaying vegetable matter, or on mossy trees and rocks. 40° to 60°.

- ✕ **Chiloense** (Hook.) A small species, densely carpeting rocks and trees in *Southern Chili*. Fronds broad at the base, dense, dull green, twice divided (*bi-pinnatifid*.) 40° to 55°.

- ✕ **ciliatum** (Sw.) Fronds 3 inches long, from a creeping rhizome; hairy throughout, especially at the edges, broadly ovate, dense, (*bi-tri-pinnatifid*). Stalks short, broadly winged to the base. *West Indies*. 50° to 65°.

- ✕ **crispatum** (Hook.) A pretty species, 5 to 7 inches high, clothing the trunks of Tree-ferns, &c., in *Tasmania* and *New Zealand* with broad, erect or curving, smooth, deep green, rather dense, thrice divided (*tri-pinnatifid*), crisped fronds, on winged stalks. 40° to 60°.

- ✕ **cruentum** (Cav.) An extremely distinct and charming fern (6 to 12 inches) from *Southern Chili*; with broad, *undivided*, seaweed like curving fronds, waved at the edges, translucent, and beautifully veined. Brownish rose colour when old. Stalks long and wiry. Pendent from trees. 40° to 55°.

- ✕ **demissum** (Sw.) A handsome species, 12 to 18 inches high, from *New Zealand*, with thrice divided (*tri-pinnatifid*), smooth fronds, on tall erect wiry stalks. 40° to 60°.

- demissum v. nitidum.** A very delicate and pretty variety of *H. demissum*, from *New Zealand*, with smaller and more finely cut very shining fronds. 40° to 60°.

- ✕ *H. dichotomum* (Cav.) A beautifully crisped and transparent species, 4 to 6 inches high, from *Chili*; with broad and highly divided (3-4-pinnatifid) deep green fronds, sharply toothed or torn at the edges; on erect winged stalks. On mossy trees and rocks. 40° to 55°.
- ✕ *dilatatum* (Sw.) One of the largest and most beautiful of this charming genus, growing among moss and decaying vegetable matter in *New Zealand*. Fronds 14 to 20 inches high, broad, pale green, thrice divided (*tri-pinnatifid*), with attenuated and gracefully drooping segments. Stalks erect, winged. 40° to 55°.
- elasticum* (Bory.) A graceful and lovely species from the *Mauritius*, with erect or curving ovate-acuminate thrice divided (*tri-pinnatifid*) fronds of very delicate and singularly elastic texture, climbing on trees. 55° to 70°.
- elegans* (Spreng.) A very delicate species with pendent, velvety (*pinnate*) fronds 4 to 8 inches long, with slender or simply forked linear divisions, found on rocks and trees in *Jamaica*. 50° to 60°.
- ✕ *flabellatum* (Labill.) A lovely fern from *Tasmania*, with dense, glistening, twice divided (*pinnate*) fronds, 6 to 12 inches long. Pendent from the trunks of tree-ferns, &c. 40° to 65°.
- ✕ *flexuosum* (A. Cunn.) Closely allied to *H. crispatum*, but differs in having larger and more divided fronds, which are everywhere beautifully crisped and undulated. *New Zealand*. Very humid. 40° to 65°.
- fucoides* (Sw.) A pendent species from the *West Indies*, with broad, attenuated, dense, twice or thrice divided (*bi-tri-pinnatifid*) fronds, toothed at the margin, and 3 to 5 inches long. 50° to 70°.

✕ *H. fuciforme* (Sw.) After years of repeated failure we have at last succeeded in importing living plants of this truly magnificent species, from *Southern Chili*. It has broad, erect, thrice divided (*tri-pinnatifid*), bluish green, smooth fronds, $1\frac{1}{2}$ to $2\frac{1}{2}$ feet high! Stalks rigid, broadly winged. 40° to 60° .

✕ *hirsutum* (Sw.) An extremely delicate little fern, with narrow, twice divided, transparent fronds, 3 to 9 inches long, clothed with soft white or tawny hairs. Pendent from the trunks of trees in the *West Indies*. Very humid, but airy, and no water on the fronds. 50° to 70° .

✕ *hirtellum* (Sw.) A delicate and pretty species, with broad attenuated, rather open, thrice divided (*tri-pinnatifid*) pale green drooping fronds, 6 to 12 inches long, everywhere clothed with soft white, or tawny hairs. Stalks erect, round. *Jamaica*. 50° to 70° .

interruptum (Kunze.) A very fine species with twice divided (*bi-pinnatifid*) narrow fronds, 1 to 3 feet long, densely clothed with soft tawny hairs. A frond on one of our wild specimens measures 3 feet 5 inches in length, and about $2\frac{1}{2}$ inches in breadth! *West Indies*. 50° to 70° .

Javanicum (Spreng.) Nearly allied to *H. crispatum* and *H. flexuosum*, but with shorter, broader and more finely divided, extremely crisped fronds. Mountains of Java. 50° to 65° .

Magellanicum (Willd.) *H. attenuatum* (Hook.) This fine species is found on trees and rocks in *Southern Chili*, and in the *Island of Chiloe*. Its erect fronds are 6 to 10 inches long and of a pale and rather dull green; broadly ovate or attenuated; (*tri-pinnatifid*), toothed and hairy at the margin. 40° to 60° .

H. Neesii (Hook.) A rare and very distinct species just introduced from the mountains of *Java*, with erect ovate thrice divided (*tri-pinnatifid*) fronds, 2 to 3 inches high, of which the margins of the segments are deeply undulate, and serrated with soft jagged teeth. 55° to 70°.

pectinatum (Cav.) One of the most beautiful of the genus, found on trees in *Southern Chili*. Fronds linear-oblong, (*pinnate*,) 4 to 6 inches long: pinnules comb-like, being confined to the upper side of the pinnæ. 40° to 60°.

✕ **Plumieri** (Hook and Grev.) Closely allied to *H. ciliatum*, and perhaps not specifically distinct. Differs in its larger fronds, and more remote, but less deeply cut pinnæ. *West Indies*. 55° to 70°.

✕ **polyanthos** (Sw.) A pretty fern, 4 to 8 inches high, from the *West Indies* and *New Zealand*, with erect or curving, thrice divided (*tri-pinnatifid*), smooth and dark green fronds, on wiry stalks. 50° to 60°.

✕ **pulcherrimum** (Col.) An erect and handsome species, 10 to 15 inches high, from *New Zealand*, with three or four times divided (*3.4-pinnatifid*) smooth, pale green fronds, on winged stalks. 40° to 60°.

✕ **rarum** (Br.) A small densely matted species, from *Tasmania* and *Chili*, resembling *H. Tunbridgensis*, but with narrower and less divided (*bi-pinnatifid*) fronds. 40 to 60°.

sabinæfolium (Baker.)? A small species from the mountains of *Java*, with broadly ovate (*tri-pinnatifid*) fronds of which the segments are so crisped and torn as to resemble a sprig of the Savin Juniper. 55° to 70°.

- ✕ **H. scabrum** (A. Rich.) A very beautiful fern, 12 to 18 inches high, from *New Zealand*, with three or four times divided rather hairy fronds, on erect round stalks, which are rough with pale chaffy hairs. 40° to 60°.
- ✕ **sericeum** (Sw.) A distinct and very fine species, clothing the faces of rocks in the *West Indies*, with sheets of twice divided (*pinnate*) tawny and densely silky pendent fronds, 1 to 2 feet long, and 2 to 3 inches wide. Dislikes being watered on the fronds. 50° to 70°.
- ✕ **Tunbridgense** (Sm.) A well known fern, forming dense carpets on moist rocks in many parts of Great Britain and Ireland. Fronds erect, flat, twice divided (*pinnate*) very delicate, serrated at the edges. Stalk wiry. Involucres nearly round, toothed at the top. Dislikes water on the fronds, except by condensation. 40° to 60°.
- ✕ **Wilsoni** (Hook.) Another British species, closely allied to *as unilat.* the preceding, but differing in its more attenuated fronds, and pinnæ curved to one side, as well as in its inversely pear shaped involucres. 30° to 50°
- ✕ **valvatum** (Hook and Grev.) A charming species from the *West Indies*, with ovate, attenuated, nearly smooth dark green fronds, 6 to 12 inches long, thrice divided (*tripinnatifid*) and everywhere beautifully undulated. Stalks black, wiry; hairy when young. 50° to 65°.

TRICHOMANES.

✕ **alatum** (Sw.) **T. attenuatum** (Hook.) A most lovely fern, 6 to 12 inches high, with very transparent pale green (2-3-pinnatifid) curving fronds, borne on erect winged stalks. Pinnæ often much attenuated, producing a charming effect, especially when the fronds are laden with moisture. 55° to 70°.

✕ **anceps** (Hook.) A magnificent species, 1½ to 2 feet high, from the *West Indies*, forming tufts of broadly ovate, dark green, nearly smooth, dense, firm fronds, three or four times divided, (pinnate) on tall, erect, round, hairy stalks. 55° to 75°.

Ankersii (Parker.) A very distinct species from *Trinidad* and *Guiana*, climbing to a great elevation on trees, and rooting in the ground like Ivy. Fronds dark green, firm in texture, distant, nearly sessile, broadly lanceolate and crenated, 3 to 6 inches long. Likes an airy and not very damp position. 60° to 75°.

✕ **angustatum** (Carm.) A very delicate and beautiful creeping species from *South America*, having bright green, thrice divided (pinnate) smooth fronds, 3 to 5 inches long, on hair like stalks. Pinnules very narrow. Grows freely with the Killarney Fern. 45° to 60°.

auriculatum (Blume.) One of the loveliest of ferns! Climbs on rocks, and "to the tops of the loftiest trees" in the mountains of Java. Fronds exquisitely transparent, 9 to 12 inches long, bi-pinnatifid. Pinnæ, when sterile broadly ovate;—when fertile deeply incised. Of very free growth. 50° to 70°.

- ✱ **T. Bancroftii** (Hook.) A distinct and pretty species from the *West Indies*, forming star-like tufts of dense, smooth, ovate, semi-pellucid fronds, 3 to 5 inches high, and once or twice divided (*sub-bipinnatifid.*) Stalks short, very broadly winged. 60° to 70°.

Bauerianum (Endl.) **T. meifolium var Bauerianum** (Hook.)

This beautiful fern, which has hitherto been found only on Norfolk Island, 1,000 miles from the coast of Australia, forms plume-like tufts of light-green highly divided ovate-lanceolate fronds 12 to 18 inches in height. Growing in cool damp ravines, it flourishes in a temperature of 40° to 60°, rooting deeply in sandy leaf-mould and loam, mixed with broken sandstone.

Through the permission of the Colonial Government at Sydney, we were enabled to obtain this plant from the remote station above indicated, where no vessels, except those belonging to the government are allowed to land. After a double voyage amounting to nearly 16,000 miles, several plants packed in Wardian Cases still survived and are now growing freely.

bilabiatum (Nees.) Closely allied to *T. Filicula*, but much larger and with broadly ovate or triangular fronds. *Java*. 50° to 70°.

- ✱ **Bojeri** (Hook.) A very small species, with roundish, or attenuated and crenate fronds, clothing the trunks of palms and tree ferns in the *Mauritius*. 60° to 80°.

brachypus (Kunze.) Resembling *T. Ankersii* in habit and yet conspicuously distinct. Fronds very pale-green, extremely thin and transparent, twice or thrice divided (*2-3-pinnatifid*), adhering to the substance around which they twine, throughout their whole length! *Trinidad*. Dislikes a close and very humid atmosphere. 60° to 75°.

- T. Colensoi** (Hook.) A small species from *New Zealand* with slender dark-green *pinnate* fronds, with narrow segments curving to one side. 45° to 60°.
- ✕ **ccriaceum** (Kunze)? A most lovely fern from the *West Indies*, allied to *T. Bancroftii*, but differing in its larger and excessively crisped and undulated, thrice divided (*tri-pinnatifid*) fronds, and much more numerous involucres. Grows among moss and on trees. 60° to 70°.
- ✕ **crinitum** (Sw.) Forms charming tufts of broadly oblong, very glaucous, twice divided (*pinnate*) fronds, covered with soft white hairs. Stalks round, very hairy. *West Indies*. Dislikes water on the fronds. 50° to 70°.
- ✕ **crispum** (Linn.) A handsome and distinct species, 15 to 20 inches high, from the *West Indies*, forming tufts of narrow, glaucous, hairy, once divided (*pinnate*) fronds, on tall round hairy stalks. Pinnæ very blunt, sometimes crowded and beautifully crisped. 55° to 70°.
- ✕ **elegans** (Rudge.) A very distinct fern from the *West Indies*, forming tufts of very dark green, shining, spreading, once divided (*pinnatifid*,) sterile fronds, 9 to 12 inches long; and extremely narrow, undivided fertile fronds on erect stalks in the centre. 60° to 75°.
- ✕ **elongatum** (A. Cunn.) A tufted fern, 6 to 12 inches high, from *New Zealand*, with very dense, triangular-ovate, dark green, rigid fronds on erect wiry stems. 50° to 65°.
- ✕ **exsectum** (Kunze.) A most lovely creeping fern, pendent from the roofs of caverns in *Southern Chili*. Fronds extremely delicate and membranaceous, 9 to 12 or 14 inches long, and 5 or 6 inches wide, highly divided (*tri-pinnatifid*); like thin, flat, much branched, green sea-weed, with narrow segments. Stalks almost hair-like. 45° to 60°.

✱ **T. Filicula** (Bory.) A creeping species from the *Mauritius*, with erect, open, rather firm, dark-green, smooth, twice divided (*bi-pinnatifid*) fronds, on winged stalks. 50° to 65°.

✱ **fimbriatum** (Backh.) **T. superbum** (Van Den Bosch.) A very fine species from *Trinidad*, closely allied to *T. alatum*, but much more robust, and with triangular fronds, of which the pinnules are frequently torn into almost thread-like fringes. Stem very broadly winged. 55° to 70°. (Our *T. superbum* from *Borneo*, is a totally different plant. Its fronds are 1½ to 2½ feet high and a foot or more wide! with winged stalks two-thirds of an inch across!)

✱ **floribundum** (Hook.) A noble and most lovely fern from the *West Indies*, forming tufts 1½ to 2 feet high, and 8 to 10 inches broad, of exquisitely transparent, pale-green, once divided (*pinnate*) fronds, beautifully fringed with hair-like receptacles, and attenuated and rooting at the extremity. Stalks round, erect, and hairy when young. 60° to 80°.

humile (Forster.) A small species from *New Zealand* forming dense mats of dark-green twice divided fronds.

✱ **Kaulfussii** (Hook.) An erect and handsome species, 9 to 18 inches high, from the *West Indies*, with narrow, rather hairy, dull green, once or twice divided (*sub-bipinnatifid*) fronds, on broadly winged hairy stalks. 60° to 75°.

longisetum (Bory.) A most beautiful species from *Borneo*, and *Java*, with erect, rigid, highly divided, open fronds, 6 to 12 inches high, with hair-like pinnules, and wiry stalks. 55° to 70°.

✕ **T. Luschnathianum** (Pr.) A very handsome climbing fern from *Brazil*, allied to *T. radicans*, but differs in having nearly or quite sessile, lanceolate fronds $1\frac{1}{2}$ feet long, and a very long, slender, round and nearly smooth creeping caudex. One of our plants when received was 15 feet long! 50° to 70° .

maximum (Blume.) A most noble species from *Java*, somewhat resembling *T. radicans*, but with pale green (4-pinnatifid) fronds, 2 to 3 feet high and 6 inches wide, of nearly equal breadth throughout. 50° to 65° .

meifolium. One of the most beautiful of all ferns. Its noble plumes of tufted fronds are fully 2 feet high. They are lanceolate in form and very much divided, being cut into slender linear segments, some of which standing forward, as in the well known *Todea superba*, give an effect of almost incomparable softness and richness. After several futile attempts to import this charming plant at heavy expense, our efforts have at last been crowned with success. Lofty mountains of *Java*, 4,000 to 7,000 feet. 45° to 65° .

✕ **membranaceum** (Linn.) A very distinct and interesting creeping fern, from the *West Indies*, forming round or obovate, nearly or quite stemless, deep green, glossy fronds, 2 to 3 inches long, and sometimes as much in width; entire, incised, or torn at the edges, and with fan-like veins. 60° to 75° .

✕ **muscoides** (Sw.) A delicate sea-weed-like creeping fern from the *West Indies* and *Java*, forming dense mats of undivided, or deeply waved, blunt, translucent, bright green, nearly stemless fronds, $1\frac{1}{2}$ to $2\frac{1}{2}$ inches high, with a central vein. 60° to 75° .

olivaceum (Kunze.) Resembles *T. pyxidiferum*, but much larger and more robust (6 to 10 inches high). *Trinidad* and *Venezuela*. 45° to 60° .

- T. proliferum** (Blume.) A small species from *Java*, producing new fronds from the bases of the older ones in a very singular manner. Rhizome creeping. Fronds about an inch across, deeply cleft into a sub-palmate form. 55° to 70°.
- ✧ **pusillum** (Sw.) A minute *West Indian* species, creeping on the stems of palms, &c., with oblong or wedge shaped, lobed fronds, tapering into very short stalks. 55° to 70°.
- ✧ **pyxidiferum** (Linn.) A creeping fern, variable in form, from the *West Indies*, with twice divided (*bi-pinnatifid*) smooth, firm, and rather flat fronds, 3 to 4 inches high. On trunks of palms, &c. 50° to 70°.
- ✧ **radicans** (Sw.) **T. speciosum** (Willd.) The "*Killarney Fern*." A beautiful species, creeping on moist rocks in the south-west of Ireland, Madeira, &c. First found in Yorkshire! Frond triangular-ovate, dark green, highly divided (3-4-*pinnatifid*), on tall hairy stalks. Shady and very humid. 40° to 70°.
- var. **dilatatum**. Fewer and very broad divisions, a very distinct and striking variety, resembling *Hymenophyllum dilatatum* in its broadly winged stem.
- var. **dissectum**. Very finely divided pinnules. The "antipodes" of the var. *dilatatum*!
- var. **Andrewsii**. Fronds lanceolate. Fruits freely.
- ✧ **reniforme** (Forst.) A very distinct creeping species from *New Zealand*, with nearly round, undivided dark green, beautifully veined fronds, heart-shaped at the base, and 4 to 5 inches broad, on tall wiry stalks. 40° to 60°.
- ✧ **reptans** (Sw.) A very minute species, creeping on palms, &c., in the *West Indies*, with roundish or wedge-shaped, more or less incised fronds, having fan-shaped veins. 55° to 70°.

✧ *T. rigidum* (Sw.) A fine tufted fern, 9 to 12 inches high, from *West Indies*, &c., with broadly ovate, rigid, dark green, 3 or 4 times divided (*bi-pinnate*) fronds, on erect round wiry stalks. 55° to 75°. The typical form has nearly flat and rather dense fronds.

✧ *scandens* (Linn.) A lovely and delicate fern, 15 to 18 inches long, from the *West Indies*, with slender, ovate, attenuated, four times divided (*bi-pinnate*), curving fronds, of a very pale green. Stalks long wiry. Creeps on tree ferns and palms. 55° to 70°.

Sellowianum (Presl.) A most charming fern allied to *T. crispum*, but with much taller and more tufted fronds, (*T. crispum* "runs" like *Polypodium vulgare*). Pinnules less obtuse; lower ones deflexed. Fronds 1½ feet high, extremely pellucid. 60° to 75°.

✧ *sinuosum* (Rich.) An extremely delicate pendent species, climbing on trees in the *West Indies*, with slightly divided (*pinnatifid*), pale green, pellucid fronds, narrowing into very short winged stalks. Lobes blunt, hairy at the margin. 60° to 75°.

speciosum (Willd.) See *T. radicans*.

✧ *spicatum* (Hedw.) Resembles *T. elegans*, but smaller in all its parts. Fronds 3 to 6 inches high, and with narrower pinnules. Fertile fronds on separate stalks. Involucres unconnected. *West Indies*. 55° to 75°.

✧ *thujoides* (Desv.) A handsome tufted species, 9 to 18 inches high, from the *Mauritius*, with ovate attenuated, thrice divided (*tri-pinnatifid*) fronds on erect round stalks, hairy at the base and winged above. 60° to 75°.

✧ *T. trichoideum* (Sw.) An extremely delicate creeping species, from the *West Indies*, like the finest hair-like seaweed, forming thrice divided (*tri-pinnate*), sub-cylindrical fronds, 6 to 10 inches high. 45° to 60°.

✧ *venosum* (Br.) A pretty little fern, 3 to 5 inches high, carpeting the trunks of tree ferns in *Tasmania* and *New Zealand* with slender, densely matted, glistening, once divided (*pinnate*) fronds, having blunt and undulated pinnules. 40° to 60°.

sp. from *New Granada*. Of the *T. crispum* group, but with erect rhizomes and pinnules crenated. Recently received, and not yet in full character. 60° to 75°.

sp. from *New Granada*. A perfect gem of the *crispum* section, forming dense tufts of excessively crisped deep-green fronds 3 to 4 inches long. Very distinct, and probably quite new. Grows in airy, and even slightly sunny situations. 60° to 70°.

Zollingeri (V. D. B.) A fine tufted species from *Java* and the *Philippine Islands*, with smooth, dark-green, glossy, erect, once divided (*pinnate*) fronds, 8 to 12 inches high, on round hairy stalks. 60° to 75°.



A General Catalogue of FERNS and ORCHIDACEÆ

CAN ALSO BE SUPPLIED.

W. SESSIONS, PRINTER, YORK.